

Nos. 24-11076, 24-11300, 24-11366, 24-11367,
24-11428, 24-11444, 24-11445 & 24-12003

**UNITED STATES COURT OF APPEALS
FOR THE ELEVENTH CIRCUIT**

FLORIDA EAST COAST RAILWAY LLC, *et al.*,
Petitioners,

v.

FEDERAL RAILROAD ADMINISTRATION, *et al.*,
Respondents,

ON PETITION FOR REVIEW FROM
THE FEDERAL RAILROAD ADMINISTRATION

**BRIEF OF AMICI CURIAE ILLINOIS, COLORADO,
CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA,
MARYLAND, MICHIGAN, MINNESOTA, NEW JERSEY, NEW
MEXICO, NEW YORK, NORTH CAROLINA, OREGON,
PENNSYLVANIA, RHODE ISLAND, AND WASHINGTON
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**CERTIFICATE OF INTERESTED PERSONS AND
CORPORATE DISCLOSURE STATEMENT**

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IDENTITY AND INTEREST OF AMICI STATES

The States of Illinois, Colorado, Connecticut, Delaware, District of Columbia, Maryland, Michigan, Minnesota, New Jersey, New Mexico, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, and Washington submit this brief in support of respondents pursuant to Federal Rule of Appellate Procedure 29(a)(2). Amici States have a substantial interest in the public health, safety, and welfare, which includes the safe operation of trains that pass through their borders.

That interest is implicated by this case, which addresses the validity of the Federal Railroad Administration’s (“FRA”) April 9, 2024 Final Rule—Train Crew Size Safety Requirements, 89 Fed. Reg. 25052 (“Final Rule” or “Rule”). The Final Rule sets a baseline requirement that most freight and passenger trains be staffed with at least two crewmembers unless the railroad has completed a risk assessment and received special approval to operate a one-person crew. *Id.* By imposing these minimum requirements, the Rule promotes a safer work environment for the crewmembers, who work long and often irregular hours while performing physically and cognitively demanding tasks. And promoting safer work environments, in turn, lessens the risk of

train accidents, which can inflict serious harm on the amici States' environments, communities, and residents (particularly those who live or work in proximity to railways).

Although the amici States have taken different approaches to regulating the number of crewmembers on trains operating within their borders, all agree that petitioners' challenge to the Final Rule, if successful, would interfere with their important interest in public safety. In fact, some of the States joining this brief, such as Illinois, impose more onerous requirements on minimum crew size than the Final Rule. Nevertheless, they support respondents because vacatur of the Final Rule would make rail operations less safe nationally and eliminate important safeguards for their residents who work or travel in other States, including the crewmembers themselves. Amici States thus urge this court to deny the petition for review.

STATEMENT OF THE ISSUE

Whether the FRA properly exercised its authority when it promulgated a rule establishing minimum safety requirements for the size of train crews.

SUMMARY OF ARGUMENT

In 2022, the FRA proposed a rule establishing a minimum requirement of two crewmembers for train crews, with exceptions for certain operations that would not pose safety risks to employees, the public, or the environment. *See* Notice of Proposed Rulemaking—Train Crew Size Safety Requirements, 87 Fed. Reg. 45564 (July 28, 2022) (“NPRM”). As part of this proposal, the FRA considered wide-ranging background materials, such as the history of train crew staffing in this country; safety concerns arising from one-person crews; how technological advances could mitigate those concerns; the federal and state regulatory landscape; and the FRA’s prior efforts on this topic, which include the FRA’s proposed regulations on train crew size in 2016, the FRA’s 2019 withdrawal of those proposed regulations, and the Ninth Circuit’s vacatur of the 2019 withdrawal order. *Id.* at 45567-86.

In 2024, the FRA issued the Final Rule, which revised certain aspects of the NPRM to account for the comments received from the public, as well as additional information made available to it. 89 Fed. Reg. at 25059-61. Relevant here, the Rule “requires railroad operations to have a minimum of two crewmembers except for certain identified

one-person train crew operations that do not pose significant safety risks to railroad employees, or the environment.” *Id.* at 25052. A railroad may qualify for such an exception by satisfying enumerated requirements or by completing a risk assessment designed to evaluate hazards and ensure risk mitigations to reduce the likelihood of future accidents. *Id.* In other words, as the FRA explains, *see* FRA Br. 12-18, railroads will be able to operate with one-person crews so long as they can show that in doing so, the operation adequately protects the safety of the railroad’s workforce and the public. The goal of this risk assessment process is to “ensure that trains are adequately staffed for their intended operation and railroads have appropriate safeguards in place for safe train operations whenever using a one-person crew.” 89 Fed. Reg. at 25052.

Petitioners, however, seek to operate one-person crews without completing this risk assessment process and, accordingly, have filed petitions for review seeking vacatur of the Final Rule. According to petitioners, the Rule is invalid for numerous reasons, including that it is not “necessary” for railroad safety, conflicts with the federal statutory scheme governing crew size, provides an insufficient explanation for its

departure from the 2019 withdrawal order, conducted a flawed cost-benefit analysis, and is untimely. *E.g.*, Pet. Br. 4-6. But as the FRA explains, each of these arguments is meritless.

In particular, petitioners' argument that the Rule is unnecessary for railroad safety is flawed in multiple respects. To start, petitioners misstate the appropriate legal standard: the statutory language delegating rulemaking authority to the FRA does not require that the agency meet some heightened standard of necessity to promulgate safety regulations, as petitioners claim. *See* Pet. Br. 24-27. Rather, as the FRA explains, that language delegates discretionary authority to the FRA to promulgate appropriate safety-based regulations. FRA Br. 30-41. But even if that were the correct standard, there is ample evidence that the Final Rule would satisfy it.

Indeed, as amici States describe below, research on safe train operations shows that operating trains with a single crewmember typically creates a more dangerous work environment for railroad employees that, in turn, negatively impacts the health and safety of those workers and the amici States' residents. And although technological advancements have improved in recent years, they do not

yet serve as an adequate substitute for additional crewmembers in all circumstances. Furthermore, as recent events have shown, the consequences of unsafe train operations are devastating to local communities across the country—they kill and injure residents, burden local resources, and leave behind environmental damage that requires substantial time and funding to remediate. For these reasons, and those outlined by the FRA, this court should conclude that the Final Rule is necessary to ensure the safe operation of railroads and prevent accidents that will harm amici States.

ARGUMENT

I. The Final Rule Ensures That Railroad Employees Have Safe Work Environments.

The Final Rule is necessary for public safety because it ensures a safe work environment for railroad employees. As numerous studies have shown, crewmembers typically operate trains more safely when working as part of a team because they are able to coordinate with one another, provide backup in emergency situations, solve problems together as they arise, and protect against fatigue. Furthermore, the benefits attributed to a two-person crew cannot yet reliably be replaced by technological advances. Consistent with this research, the Final

Rule establishes a baseline of two crewmembers for most train operations. At the same time, when railroads can show that a one-person crew can operate safely notwithstanding these risks, they will be able to obtain an exception.

A. Train operations are typically safer when crewmembers work as part of a team.

The safety of a railroad employee, and thus of the train operation itself, is enhanced when employees operate as part of a team. As the FRA recognized, employees who work together are able to coordinate activities, share workloads, reduce fatigue, communicate, problem solve, and learn through observation of other crewmembers' strategies and skill sets. *E.g.*, 87 Fed. Reg. at 45572-73; 89 Fed. Reg. at 25065-67.

Operating a train is a complex task involving the coordination of multiple activities. A train crew typically consists of at least a locomotive engineer and a conductor. *E.g.*, 87 Fed. Reg. at 45567-68. The engineer's primary role is to drive the train engine from within the cab, which requires him or her to have extensive knowledge of the rail lines and operating rules and to quickly assess evolving situations.¹ In

¹ Emilie Roth & Jordan Multer, Office of Research and Dev., Fed. R.R. Admin., Technology Implications of a Cognitive Task Analysis for

that role, the engineer's duties include operating the controls, throttles, brakes, and other equipment; maintaining an appropriate speed of travel; monitoring instruments and gauges, such as air pressure and battery use; observing track and highway-rail grade crossings for hazards or other obstructions; and analyzing updated information, signals, and alerts for factors that could impact the operation of the train and require immediate action.²

Conductors help engineers by coordinating and overseeing the activities of the train and any other crewmembers to ensure a safe and efficient operation.³ Some of the conductor's specific duties may differ based on whether the engineer or conductor is operating a passenger or freight train, but they work together as a "tightly coupled cooperative team" to ensure safety and efficiency.⁴

Locomotive Engineers 28-29 (2009) (hereinafter "Technology Implications"), <https://bit.ly/3ZkGUKr>.

² Bureau of Labor Statistics, U.S. Dep't of Labor, Occupational Outlook Handbook, Railroad Workers, <https://bit.ly/4gmJJjX>.

³ *Id.*; see also Office of R.R. Policy & Dev., Fed. R.R. Admin., DOT/FRA/ORD-12/13, Cognitive and Collaborative Demands of Freight Conductor Activities: Results and Implications of a Cognitive Task Analysis—Human Factors in Railroad Operations 5 (2012) (hereinafter "Cognitive and Collaborative Demands"), <https://bit.ly/4dYjfUi>.

⁴ Cognitive and Collaborative Demands, *supra* note 3, at 42.

As a team, engineers and conductors communicate constantly.⁵ They work together to monitor the train and track conditions, identify or anticipate problems, resolve or mitigate risks, and plan ahead during low periods of activity.⁶ Conductors also provide important support to engineers by reminding the engineer of upcoming changes, restrictions, or signals; helping to catch and mitigate mistakes; as well as helping the engineer to stay alert during monotonous conditions.⁷ Along these lines, studies have shown that when working as a team, crewmembers are able to point out “situations that may have escaped the other’s attention.”⁸ This is important because hazards on the track may arise while the engineer is focused on a task inside the cab or is manning the controls. In fact, the FRA’s Collision Analysis Working Group has

⁵ Occupational Outlook Handbook, *supra* note 2.

⁶ Cognitive and Collaborative Demands, *supra* note 3, at 42.

⁷ Eduardo Salas *et al.*, *Promoting Teamwork When Lives Depend On It: What Matters in the Railroad Industry?*, in Transportation Research Circular, Teamwork in U.S. Railroad Operations: A Conference, No. E-C159, 10, 14, 70-72 (2011), (hereinafter “Promoting Teamwork”) <https://bit.ly/4gkzVqG>; Cognitive and Collaborative Demands, *supra* note 3, at 42; 87 Fed. Reg. at 45568.

⁸ Collision Analysis Working Group, Fed. R.R. Admin., 65 Main-Track Train Collisions, 1997 through 2002: Review, Analysis, Findings, and Recommendations, 43 (2006) (hereinafter “Train Collisions”), <https://bit.ly/47pptdn>.

concluded that some of the 65 collisions it studied could have been avoided if a conductor had been present in the cab with the engineer.⁹ Finally, conductors serve as the backup for the engineer, including, for example, by activating the train's emergency brakes if the engineer fails to do so or by taking control of the cab if the engineer becomes incapacitated.¹⁰

In many ways, the safe operation of trains is analogous to the safe operation of an aircraft or the safe execution of a military operation.¹¹ Each of these operations requires the use of expert teams, composed of trained individuals with distinct roles. Working together, team members in each of these fields coordinate their activities to carry out a shared goal in the safest manner possible.¹²

In fact, teamwork is so entrenched in the operation of freight and passenger trains that many FRA regulations are based on the

⁹ *Id.*

¹⁰ Cognitive and Collaborative Demands, *supra* note 3, at 42.

¹¹ Elliot E. Entin *et al.*, *Enhancing Communication to Improve Team Performance with Application to Train Crews*, in Transportation Research Circular, No. E-C159, Teamwork in U.S. Railroad Operations: A Conference 27, 28 (2011); *see also* Promoting Teamwork, *supra* note 7, at 23.

¹² Promoting Teamwork, *supra* note 7, at 12.

assumption that crewmembers will work together to complete tasks. In the NPRM, the FRA thus raised the possibility that “the implementation of a one-person operation, without any off-setting measures, may render existing rail safety requirements either less effective or ineffective.” 87 Fed. Reg. at 45573. This is “especially true” when a crewmember is engaged in “prohibited conduct that is not always easy for railroad officers who conduct operational tests and inspections to detect.” *Id.* For example, the presence of a second crewmember can deter the prohibited use of electronic devices or detect and report a drug or alcohol problem. *Id.* It is also particularly important, as the FRA noted in the Final Rule, when crewmembers are required to secure the train with handbrakes, “as a one-person crew could not do so without violating railroad air brake and train handling requirements” under other FRA regulations. 89 Fed. Reg. at 25053.

Additionally, a single-person crew may not be able to safely evacuate passengers in the event of an emergency, obey a mandatory directive received via radio transmission while simultaneously driving the train, or manually add a safety hazard when the automated highway-grade crossings have failed. 87 Fed. Reg. at 45575-76, 45579.

A single crewmember will also lose the benefit of “job briefings,” which require, among other things, crewmembers to discuss how to safely complete an operation “before work is begun, each time a work plan is changed, and at completion of the work.” *Id.* at 45574. During these briefings, which would not occur with only a single crewmember present, the engineer and conductor are able to craft an appropriate plan of action based on their collective experience and training. *Id.* Thus, as research has shown, pairing a conductor with an engineer can mitigate risk.¹³

Finally, research shows that single-person crews are more at risk of fatigue because they lack the backup support of other crewmembers. 87 Fed. Reg. 45572; *see also* 89 Fed. Reg. at 25064. As numerous studies have shown, fatigue has long been deemed one of the most critical safety issues for the railroad industry.¹⁴ Because the industry operates 24 hours a day, 7 days a week, many employees work irregular hours—including on nights, weekends, and holidays—or on long routes

¹³ Train Collisions, *supra* note 8, at 43-46.

¹⁴ Office of R.R. Policy & Dev., Fed. R.R. Admin., RR 18-11, Railroaders’ Guide to Healthy Sleep 2 (2018), <https://bit.ly/3ToZVaA>.

that keep them away from home for extended periods of time.¹⁵ And any sleep deficit created by those conditions, combined with the physical and cognitive demands of operating a train, can increase the likelihood of a train accident: according to one study, fatigued train employees are more than five times as likely to cause or be involved in a train accident than non-fatigued employees.¹⁶ Another report determined that operating a train while fatigued was as risky as having a 0.08 blood alcohol content level.¹⁷ Research has also confirmed that the associated costs of train accidents caused by fatigue dwarf those with no evidence of fatigue; in fact, the economic cost of fatigue-related accidents is quadruple those of non-fatigue-related accidents.¹⁸

¹⁵ Occupational Outlook Handbook, *supra* note 2.

¹⁶ Thomas G. Raslear, Office of Research & Dev., Fed. R.R. Admin., DOT/FRA/ORD-14/05, Start Time Variability and Predictability in Railroad Train and Engine Freight and Passenger Service Employees 16 (2014), <https://bit.ly/3B0usW0>.

¹⁷ Steven R. Hursh *et al.*, Office of Research & Dev., Fed. R.R. Admin., DOT/FRA/ORD-08/04, Validation and Calibration of a Fatigue Assessment Tool for Railroad Work Schedules—Final Report 21 (2008), <https://bit.ly/3B8V8nk>.

¹⁸ Judith Gertler *et al.*, Office of Research & Dev., Fed. R.R. Admin., DOT/FRA/ORD-1306, Fatigue Status of the U.S. Railroad Industry 64 (2013), <https://bit.ly/3TPge0M>.

In a single-person crew, all of the responsibilities for operating the locomotive engine; maintaining vigilance over the external, internal, and situational conditions; as well as all other manual and administrative duties, falls to a single engineer. These conditions leave little room for distractions, and an unexpected alert could, for example, cause an engineer to miss a speed restriction.¹⁹ Multiple-person train crews offer protective benefits against overloading and any resultant fatigue, and can thus help to enhance the overall safety of train operations.

All told, as the FRA rightly determined when setting a baseline minimum of two crewmembers, train operations are safer when crewmembers are able to work in tandem.

B. The use of positive train control systems and related technology is not necessarily a sufficient substitute for multiple crewmembers.

The Final Rule also takes into account the possibility that the advent of technological advances like positive train control systems—which are automated train management systems designed to prevent train-to-train accidents—could reduce the need for multiple

¹⁹ *Id.* at 24-25.

crewmembers on trains in circumstances where it has been shown to be safe to do so. 89 Fed. Reg. at 25081-82. But as the FRA also rightly acknowledged, these technological advancements, though beneficial and critical for overall train safety, are not a sufficient substitute for a second crewmember as a categorical matter. *Id.* at 25081-82.

As an initial matter, positive train control systems are not yet fully operational. As the FRA recounted in the Final Rule, the majority of the rail network in the United States is still not governed by positive train control technology. *Id.* at 25067. And railroads using the lines equipped with positive train control systems often face outages of those systems, both planned and unplanned. *Id.* In those circumstances, the crew “must be able to operate the train safely or bring the train to a safe stop until the technology is repaired.” 87 Fed. Reg. at 45573.

Furthermore, even when installed and operational, this technology has limitations. As the FRA explained, the recently enhanced positive train control systems “do not perform all the necessary functions in all operating environments.” 87 Fed. Reg. at 25081. Indeed, these systems were designed to prevent train-to-train collisions, correct excessive speeds, and ensure proper movement of

trains through track switches and maintenance zones.²⁰ These systems do not, however, prevent collisions with pedestrians, vehicles, or other objects at highway-rail grade crossings.²¹ In other words, although a positive train control system may be capable of stopping or slowing a train to avoid a collision with another train, it does not identify hazards at crossings, such as a vehicle stalled on a track. This gap in coverage is significant. In Illinois alone, for instance, there are 7,595 public grade crossings.²²

There are also lingering questions about the technology's ability to perform the job functions of a conductor (the second crewmember). 87 Fed. Reg. at 45581. As the FRA explained, while the implementation of positive train control systems effectively performs certain of those duties, it does not, for example, check the engineer's alertness; assist if the positive train control technology becomes unavailable; fill in any

²⁰ Fed. R.R. Admin., PTC System Information, <https://bit.ly/3BqSdGU>; Ass'n of Am. R.R.s, The Role of Positive Train Control Technology, <https://bit.ly/3B0AB4y>.

²¹ The Role of Positive Train Control Technology, *supra* note 20; *see also* Technology Implications, *supra* note 1, at 36.

²² Illinois Rail Facts, Illinois Commerce Commission (2019), <https://bit.ly/3BzdPkh>.

knowledge or experience gaps, especially related to difficult operational problems that might arise; assist in applying handbrakes; flag upcoming grade crossings; or assist in restricting speed to avoid collisions. *Id.*

Finally, the combination of positive train control systems and one-person crews has not been sufficiently analyzed. *Id.* at 45572-73. This lack of information is concerning because positive train control systems create additional cognitive demands for train engineers. *E.g.*, 89 Fed. Reg. at 25062-63; 87 Fed. Reg. at 45564, 45573. As the FRA explained, locomotive engineers have traditionally been “highly engaged with the train operation, noticing visual cues (*i.e.*, landmarks and mileposts), monitoring radio communications of other trains, and relaying information by radio to other trains about potential hazards.” 87 Fed. Reg. at 45573. But the current research suggests that positive train control technology “may require locomotive engineers to focus more on in-cab displays and thereby reduce their ability to monitor activity outside of the cab.” *Id.*

In short, the Final Rule strikes the correct balance between ensuring the safe operation of trains and authorizing technological

advancements. Its approach, which does not categorically approve the use of positive train control technology with a single crewmember, is consistent with research and necessary for public safety.

II. The Safe Operation Of Trains Prevents Accidents And Mitigates Their Harmful Effects.

The safe operation of trains is of particular importance to amici States, given the harmful consequences of train derailments on their local communities, especially with respect to trains that transport crude oil and other hazardous materials by freight rail through the amici States' borders. In 2023 alone, railways transported more than 97 million barrels of crude oil—in addition to many other hazardous materials—on the 140,000 miles of freight rail in the United States.²³ That same year, there were 1,818 train accidents in the United States, over 67% of which were derailments.²⁴

This use of the rail lines to carry these materials is significant because freight trains pass through or near major metropolitan,

²³ U.S. Energy Information Admin., Movements of Crude Oil and Selected Products By Rail (2024), <https://bit.ly/3XxpEyT>.

²⁴ Bureau of Transp. Statistics, Train Fatalities, Injuries, and Accidents by Type of Accident, tbl.2-41 (2024), <https://bit.ly/4dfIAIa>.

suburban, and rural areas; schools, businesses, and residences; federal and state protected lands; and innumerable lakes and waterways. In fact, approximately 25 million Americans live within a one-mile evacuation zone of railroad track that is used to transport crude oil and other hazardous materials.²⁵ When trains carrying crude oil or other hazardous materials derail and spill their cargo, both the public and the environment are at risk of serious injury and loss. The Final Rule, which promotes the safe operation of trains by ensuring that they are staffed with a sufficient number of crewmembers, mitigates the risk that injuries to the public and the environment will occur.

A. Train accidents harm communities by injuring residents and burdening state and local resources.

To begin, train derailments can inflict significant injuries, including fatalities, to people going about their everyday lives when a train happens to derail in their community, as illustrated by a 2013 train accident that occurred in Lac-Mégantic, Canada. This accident occurred after a freight train transporting crude oil from North Dakota to New Brunswick, Canada stopped in Quebec due to mechanical

²⁵ Sean T. Dixon, *Up Around the Bend: The Next Generation of Crude-by-Rail Legal Issues*, Nat. Resources & Env't, Spring 2016, at 28.

issues.²⁶ Once stopped, the engineer (and sole crewmember on the train) engaged the air brakes and some handbrakes, left the engine running, and went to a hotel for the night.²⁷ Shortly thereafter, a fire started in the train's smokestack due to leaking oil.²⁸ Local firefighters were dispatched with instructions from the railway to turn off the locomotive.²⁹ Although this resolved the fire, it also caused the airbrakes to disengage and slowly release pressure.³⁰ The limited number of handbrakes the engineer applied could not hold the 10,000-ton train, which started rolling down a 7-mile hill and derailed near the center of the small town of Lac-Mégantic, Quebec.³¹ Sixty-three tank cars carrying oil ruptured and released more than 1.6 million gallons of

²⁶ Transp. Safety Bd. of Canada, Railway Investigation Report R13D0054—Runaway Train and Main-Track Derailment—Montreal, Maine & Atlantic Railway 1 (2013), <https://bit.ly/4gxQKOY>; Letter from Deborah A.P. Hersman, Chairwoman, Nat'l Transp. Safety Bd., to Cynthia L. Quarterman, Adm'r, Pipeline & Hazardous Materials Safety Admin. 1 (Jan. 21, 2014), <https://bit.ly/3Bb7c7I>.

²⁷ Transp. Safety Bd. of Canada, *supra* note 26, at 2.

²⁸ *Id.*; Hersman, *supra* note 26, at 2.

²⁹ Transp. Safety Bd. of Canada, *supra* note 26, at 2.

³⁰ *Id.*

³¹ Transp. Safety Bd. of Canada, *supra* note 26, at 2; Hersman, *supra* note 26, at 2.

burning oil into Lac-Mégantic, killing 47 residents and destroying 40 buildings.³² More than 2,000 people had to be evacuated as the town burned and oil spilled into the town's waterways, sewer system, and soil.³³

The investigation of the accident brought to light several concerns about the sufficiency of the railway's safety measures, including that the railway operated a one-person crew and had advised that crewmember to set an insufficient number of handbrakes.³⁴ Although Canada's Transportation Safety Board could not conclusively determine that a second crewmember would have prevented the Lac Mégantic accident, its investigative summary of the accident revealed that the railway had an "elevated level of risk"³⁵ in part because of a "weak

³² Transp. Safety Bd. of Canada, *supra* note 26, at 2; Hersman, *supra* note 26, at 2.

³³ Transp. Safety Bd. of Canada, *supra* note 26, at 3; Hersman, *supra* note 26, at 2.

³⁴ Grant Robertson, *Ten-Second Procedure Might Have Averted Lac-Mégantic Disaster*, The Globe and Mail (Mar. 7, 2016), <https://bit.ly/3XyR5by>.

³⁵ Transp. Safety Bd. of Canada, *supra* note 26, at 135.

safety culture” that contributed to “unsafe conditions [and] unsafe practices.”³⁶

The Lac-Mégantic accident is just one example of how train accidents can harm local residents. By way of another, in 2005, 9 people were killed and more than 250 required medical treatment when a train derailed in the town of Graniteville, South Carolina and released a cloud of toxic chlorine gas.³⁷ In 2002, approximately 1,500 North Dakota residents were injured when a train derailed and released anhydrous ammonia.³⁸ And in yet another incident, a freight train derailed in Rockford, Illinois in 2009, causing an explosion and large fire that burned three motorists who were stopped at a nearby crossing.³⁹

³⁶ *Id.* at 124.

³⁷ Jordan Barab, *Five Years after Lac-Mégantic, U.S. Freight Rail Going Backward on Safety*, The Century Foundation (2018), <https://bit.ly/3Xz06kO>.

³⁸ Nat’l Transp. Safety Bd., NTSB/RAR-04/01, *Derailment of Canadian Pacific Railway Freight Train 292-16 and Subsequent Release of Anhydrous Ammonia Near Minot, North Dakota—Railroad Accident Report 1* (2004), <https://bit.ly/3XuQ7Nt>.

³⁹ CNN, *1 Dead, 6 Hurt in Illinois Train Derailment* (Jun. 20, 2009), <https://bit.ly/3TvSE92>.

In addition to causing physical injuries, train accidents inflict psychological harm on survivors and witnesses who, in many cases, may be diagnosed with post-traumatic stress disorder. A 2016 study of residents of Lac-Mégantic found that two-thirds suffered from “moderate to severe” post-traumatic stress disorder, and many reported being traumatized by the sight of a sunset, the sounds of slamming doors, and both real and toy trains.⁴⁰ And in Illinois, residents of Decatur remember the chilling images they saw more than 45 years ago when a train carrying isobutane gas collided in a train yard, setting off an explosion that damaged more than 600 buildings and 80 homes, killed 7 workers, and injured more than 140 residents.⁴¹

Train accidents involving hazardous materials could also easily occur within densely populated urban areas; the train that caused the disaster in Lac-Mégantic also passed through Minneapolis, Milwaukee, Chicago, and Detroit. More recently, a train carrying liquefied

⁴⁰ Ingrid Peritz, *Lac-Megantic Residents Continue to Suffer from PTSD After Rail Tragedy: Study*, The Globe and Mail (Feb. 4, 2016), <https://bit.ly/4gxQZJS>.

⁴¹ Tony Reid, *45 Years Later, Memories of the 1974 Decatur Rail Yard Explosion Remain Fresh*, Effingham Daily News (Jul. 22, 2019), <https://bit.ly/3XLjv3w>.

petroleum gas and other hazardous materials derailed on June 27, 2024, in Matteson, Illinois, a suburb mere miles from downtown Chicago.⁴² The accident required the evacuation of about 300 residents and caused a nearby commuter rail line to suspend service.⁴³

To mitigate the harms from these accidents, first responders in local communities frequently place their lives at risk and expend significant resources in preparation for these disasters. In 2019, for example, more than a dozen freight train cars carrying methyl isobutyl ketone, a flammable liquid, derailed in the town of Dupu, Illinois.⁴⁴ The derailment caused a large fire that released black smoke into the air.⁴⁵ Emergency personnel from as many as 30 agencies responded, evacuating nearby residents as well as students at the local elementary,

⁴² CBS News, *Neighbors Evacuated for Hours After Freight Train Derails in Matteson, Illinois* (June 28, 2024), <https://bit.ly/3XZ7tDX>.

⁴³ Chicago Tribune, *25-Car Train Derailment in Matteson Causes Temporary Evacuation, Disrupts Train Schedules* (June 27, 2024), <https://bit.ly/4decPzs>.

⁴⁴ Assoc. Press, *Union Pacific Freight Train Derailment Causes Huge Fire in Southern Illinois*, ABC 7 Chicago (Sept. 10, 2019), <https://bit.ly/3Xv2sBp>.

⁴⁵ *Id.*

junior high, and high schools.⁴⁶ Another recent accident near Manuelito, New Mexico also required quick action from local first responders when 35 train cars derailed, including 6 tank cars carrying 30,000 gallons of propane each, 4 of which breached and ignited.⁴⁷ The local fire department ordered a 2-mile evacuation, 52 people were evacuated, and the interstate was closed in both directions for 2 days.⁴⁸

B. Train accidents harm the local environment.

Train accidents also harm the amici States' local environments and resources in many ways, including by contaminating the soil and leaching hazardous liquids into water sources. According to federal records, almost \$200 million worth of environmental damage was incurred over the past decade due to derailments and other accidents related to trains carrying hazardous materials.⁴⁹

⁴⁶ Doha Madani, *Train Derails and Catches Fire in Illinois, Triggering Evacuations as Smoke is Seen for Miles*, NBC News, (Sept. 10, 2019), <https://bit.ly/4goKJEt>.

⁴⁷ Nat'l Transp. Safety Bd., BNSF Railway Derailment and Hazardous Materials Release (Apr. 26, 2024), <https://bit.ly/3MX8nKt>.

⁴⁸ *Id.*

⁴⁹ Pipeline and Hazardous Materials Safety Administration, Incident Statistics (Mar. 19, 2024), <https://bit.ly/4gxOXcG> (follow hyperlink for "10 Year Incident Summary Reports," then scroll down to "Damages by

In recent years, for example, there have been numerous oil spills caused by train accidents, including a 2016 derailment in Oregon's Columbia River Gorge that spilled 42,000 gallons of crude oil;⁵⁰ 2 derailments in 2 days in Wisconsin in 2015, which resulted in 1,000 gallons of crude oil and 20,000 gallons of ethanol being spilled;⁵¹ and the 2015 derailment that spilled over 110,543 gallons of crude oil near the historic town of Galena, Illinois.⁵²

Each of these spills placed a tremendous burden on state and local communities to clean up and monitor the site of the accident. In the Galena accident, for instance, the tank cars ruptured and leaked crude oil into the ground adjacent to the Galena and Mississippi Rivers, and a resulting fire caused dense black smoke. The Illinois Attorney General reached a settlement with the railway company for \$10.5 million to

Mode and Incident Year" table and refer to "FRA-RAILWAY" row and "Grand Total" column).

⁵⁰ Assoc. Press, *A Timeline of Recent Oil Train Crashes in the US and Canada* (June 3, 2016), <https://bit.ly/3XyXqnD>.

⁵¹ Chicago Tribune, *Crews Work to Clear up After 2 Wisconsin Train Derailments* (June 20, 2019), <https://bit.ly/4d6OA6c>.

⁵² Press Release, Ill. Att'y Gen., Attorney General Announces Settlement With BNSF Railway for Oil Spill Caused by Train Derailment (Feb. 14, 2017), <https://bit.ly/3ZymqOf>.

clean the site, monitor for contamination, and reimburse state and local authorities for the costs they incurred. In another, similar incident in 2023, a train derailed near the Swinomish reservation along the Padilla Bay waterfront in Anacortes, Washington and spilled fuel onto a berm on the land side of the tracks.⁵³ Crews removed more than 2,100 cubic yards of diesel-contaminated soils and pumped out 4,300 gallons of contaminated groundwater.⁵⁴

Trains carrying other hazardous materials can also inflict substantial harm on the environment, as was demonstrated by the 2023 train derailment in East Palestine, Ohio. There, a train originating from Madison, Illinois carrying vinyl chloride monomer and other flammable and combustible materials derailed.⁵⁵ A report by the National Transportation Safety Board found that the derailment was primarily caused by an overheated bearing, leading a train car's axle to

⁵³ The Spokesman-Review, *BNSF Train Derails on Swinomish Reservation Near Anacortes* (Mar. 16, 2023), <https://bit.ly/4dc8Va0>.

⁵⁴ Central Oregon Daily News, *Officials: Safety Device, Human Error Derailed Wash. Train* (Mar. 24, 2023), <https://bit.ly/4e8fegm>.

⁵⁵ Nat'l Transp. Safety Bd., *Norfolk Southern Railway Derailment and Hazardous Materials Release Railroad Investigation Report RIR-24-05 at 1* (June 25, 2024), <https://bit.ly/47vO94e>

separate.⁵⁶ According to the report, the train's automatic safety precautions did not give its crew adequate warning of the hot bearing in time to stop the train and prevent derailment.⁵⁷

Emergency responders evacuated citizens within a one-mile radius of the derailment and were forced to burn the train cars containing the vinyl chloride monomer, fearing that it would otherwise cause an explosion.⁵⁸ In addition to putting local citizens at immediate risk of injury and illness, the derailment released a variety of hazardous materials into the environment, contaminating nearby soil and local waterways and killing thousands of fish and other marine life.⁵⁹ The U.S. Environmental Protection Agency ordered the train company to clean up the environmental damage pursuant to federal law, which is still ongoing, and recently proposed a consent decree settling federal

⁵⁶ *Id.* at 166.

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ Ohio Dept. of Natural Resources, Update on East Palestine Train Derailment Impact to Wildlife (Feb. 23, 2023), <https://bit.ly/47xLWFm>; U.S. Env't'l Prot. Agency, East Palestine Train Derailment—A Year in Review (Feb. 2024), <https://bit.ly/3Xy14hd>.

claims against the train company.⁶⁰ The consent decree requires reimbursement for EPA's efforts to restore the area, with an expected \$900 million in cleanup costs, in addition to \$25 million for ongoing medical monitoring and mental health services for local citizens, a \$15 million civil penalty, and a variety of railroad safety improvements.⁶¹ This settlement agreement does not cover Ohio's claims under state environmental statutes.

All told, amici States have a substantial interest in the validity of the Final Rule because it will protect their residents and environments from the significant harms resulting from train accidents in their communities.

⁶⁰ 89 Fed. Reg. 46,908 (May 30, 2024).

⁶¹ U.S. Dept. of Justice, United States and Norfolk Southern Railroad Settlement Agreement for the East Palestine Train Derailment (May 23, 2024), <https://bit.ly/4e2YBm6>.

CONCLUSION

This Court should deny the petitions.

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CERTIFICATE OF COMPLIANCE

I hereby certify that this brief complies with the type-volume limitation of Federal Rule of Appellate Procedure 29(b)(5) because it contains 5,506 words, excluding the parts of the brief exempted by Rule 32(a)(7)(B)(iii). This brief complies with the typeface requirement of Rule 32(a)(5) because it has been prepared in a proportionally spaced typeface (14-point Century Schoolbook) using Microsoft Word.

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I hereby certify that on October 1, 2024, I electronically filed the foregoing Brief of Amici Curiae Illinois, *et al.*, with the Clerk of the Court for the United States Court of Appeals for the Eleventh Circuit by using the CM/ECF system. I further certify that all participants in the case are registered CM/ECF users and that service will be accomplished by the CM/ECF system.

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